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A Paper Discussing the Proposed Government Ownership and Operation of the Telegraph and Telephone Systems in the United States

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Mr. President and Members of the Telephone Society: I am very happy to be here tonight and to present to you this paper upon Government Ownership, a subject which has been discussed rather freely of late and which is of interest to each one of us.

I wish, however, to emphasize at the very beginning that I do not claim any originality for the thoughts and statements contained in my paper. Like any student of such a subject I have consulted the compilations and expressions of the experts and have herein chiefly attempted to lay before you a few of the best of these expressions.

First of all, how would Government Ownership of the telephone systems of the United States affect you and me? Let us for a moment suppose that Congress has declared the telephone a Government monopoly and that the Post Office is operating the telephone systems of the country. It is to be presumed that the Civil Service list would be extended to include telephone employes. The Civil Service, as you probably know, is composed of Federal employes classified according to various positions, with a definite fixed rate of pay. A position pays a certain sum per annum regardless of the ability of the employe or his or her particular fitness for the particular work. Just give a little thought to this one phase of the situation and figure how it would affect you! As is the case in many other lines of Federal enterprise,—notably in the Post Office Department itself,—it is to be supposed that the supervisors, managers, et cetera, would be appointed, not by virtue of their knowledge of the business, but for their political usefulness. Now none of us resents direction or criticism from our respective boss for the reason that we have sufficient faith in him to believe that he knows from experience what he is talking about. He has studied the work that we are doing and he has the requisite knowledge to guide our efforts so as to produce the best results. When we make a mistake he bears with us and helps us to guard against a reoccurrence, if for no other reason than that our success makes

for his own success. With the political boss, however, the conditions would be entirely different. He would not be familiar enough with the job to be able to differentiate between work well done and work poorly done. Consequently, we would be censured for what we did and for what we did not do. Further, we would be expected to "deliver votes." If we failed in this function which is part and parcel of a political position we would speedily find ourselves out of a job "for the good of the service."

Would you work under the same comfortable surroundings if you were on Uncle Sam's payroll? Recently the Postmaster of New York City, in replying to the criticism that women were not given employment, stated that the conditions, sanitary and otherwise, in the New York Post Office building, made it an unfit place for women to work in. Compare the working conditions in Government offices with your own! Are you not taken care of now when you are sick, paid for time off and treated humanely? How much does the Company's Plan of old-age Pensions, Sick Benefits and Death Benefits or Insurance mean to you? When you want a day off to attend to some pressing personal business, do you not get it? Look into Civil Service conditions and then decide whether Government employment would be advantageous for you.

I will read a few extracts on this phase of the subject: Great Britain recently took over the privately operated telephone system and accordingly the experience of the employes is of interest to us. Article in the *Electrician* (London, England) August 15, 1913:

"The condition of affairs at the present moment is much more serious from the engineering aspect, for we understand that so numerous have been the resignations from among the engineering members in what we may term the 'National Telephone Section' of the staff that those in authority are becoming greatly concerned. It is indeed obvious that this depletion of a highly trained personnel creates a situation which must at once be dealt with adequately or most serious consequence will speedily follow. The reasons for the defection are alleged to be that the engineering staff generally is dissatisfied with the conditions in their particular branch of the State Service, not so much from the pecuniary side (though there is discontent on that score), but because of the lassitude and absence of 'momentum' which confronts and seems to pervade

the very atmosphere. These men feel that promotion is blocked for years to come, and that what little advancement they may hope to gain will be determined by seniority in the service rather than by their engineering qualifications. They feel that any initiative or foresight they possess is of no use to them, while their work is rapidly losing that absorbing interest it once had for them. The result is, we learn, that the best juniors are rapidly leaving the service, while the seniors of the old service, for whom the task of obtaining other employment is more difficult, are tending to become slack and inert through the depression of their surroundings. On the operating side, the same conditions are, we understand, to be found. Payment and promotion now depend entirely upon age and length of service rather than efficiency, as in the old days, and there is discontent among the best class of operators in the telephone service. * * * *

Editorial in *John Bull* (British weekly published by Horatio V. Bottomley, M.P.), September 28, 1912:

"Now the unforeseen fact in connection with the Post Office telephones is that the whole staff is a seething mass of discontent. * * * * Work, pay, prospects, sick-leave, pensions—in fact, all the essentials of their careers—remain unsettled, and it is not to be wondered at if the strain on their minds interferes with their alacrity and good temper. * * * * Then there are departmental matters which arouse discontent—the National Telephone Company used to encourage specialization. The Post Office, however, merges one department into another, and prefers a smattering in several branches to a sound knowledge of one. * * * * Still more annoying is the reduction in wages. The National Telephone Company used to give a man, say, 39 s. a week, with annual increments of 1 s. to 2 s. 6 d. a week according to merit. The Post Office nominally reduces him to 36 s., allows him the difference of 3 s. as an act of grace, but tells him he must never have any further increase. The Company put no limit whatever to the possibilities of promotion. Merit and experience were the only tests. * * * * Again, overtime rates are lower, casual leave is obstructed, out-of-town allowances have been reduced, and there are all sorts of petty annoyances which might easily have been avoided." * * * *

Comment in the *Pall Mall Gazette* (London, England)
November 13, 1912:

“A little light was thrown for me the other day on the mysterious cause of the inefficiency of the telephone service. I was talking to a lineman as he ate his dinner outside one of those curious little combinations of tents and caves which establish themselves for an hour or two at the corners of London streets. I asked him why, if the same staff worked the system under the National Telephone Company, they could not do so with equal efficiency under the Government. ‘It is quite true,’ he said, ‘it is the same staff, but the conditions aren’t the same. Our pay remains the same, but our conditions are less good. All our old arrangements have been knocked out and no new ones put in their place. Take my case. Under the National Telephone Company, I could have gone on being promoted until I became a’—I forget what. ‘Now I can only go on to such and such a grade, at thirty-five shillings a week. That’s made a difference in my future. There’s only one telephone in England, my work is highly specialized, and if I left this service I should have to leave the country and find another job. Now,’ added my friend, as he prepared to descend again into the cave, ‘a few people feeling like that in a service make no difference. But when you get thirty or forty thousand people all dissatisfied and all discouraged—well, the service is bound to suffer. It stands to reason, don’t it?’ ”

I am not going to read any more comments on the treatment of foreign Government telephone employes; if you are sufficiently interested you can find abundant reading bearing upon this subject, not only in Great Britain, but in other countries as well.

Before going on with the main part of my paper, I want, however, to quote you just a few statements that have been made by prominent men of this country. Former Postmaster-General Hitchcock said: “But he who intends to make his work for the Government a life-work must decide to endure great sacrifices financially. Former United States Secretary of the Interior, Hon. Walter L. Fisher made this statement: “Purely clerical and administrative work offers no special opportunities for the really efficient young men of the country. The pay and opportunities for advancement are small as compared to those in the commercial world.” The following

quoted from an article published by Hon. George Von L. Meyer, former United States Secretary of the Navy: "But there can be no doubt of the fact that the great majority of Government salaries are inadequate and that they are not particularly attractive to ambitious and energetic young men who are capable of great things." Here is what the former President of the United States Civil Service Commission, Hon. John C. Black, has to say: "Government employes who make good in scientific work, and even in clerical and executive work for the Government, can always command better salaries outside the public service." The son of a particular friend of Hon. Charles Nagel, former Secretary of Commerce and Labor, came to him one day and asked for a job. "I'll give you this job," said Mr. Nagel, "but in the return for it, I want your solemn promise that twelve months from today you will lay your resignation upon my desk. In that way you will make sure of not hopelessly burying yourself." In a vein similar to Mr. Nagel's, Hon. Champ Clark, Speaker of the House of Representatives, once said to a young man from his district: "My boy, you can do better for yourself by going back to the woods at home and hauling rails than by taking a clerkship under the Government. You'll get no job from me."

In the report to the Postmaster-General of the special committee of the Post Office Department—which report was endorsed by the Postmaster-General and recently submitted to the Senate—speaking of the acquisition of long-distance lines, the report says:

"Few engineering difficulties would be encountered in the acquisition and operation of the long-distance lines as a separate system. They are in excellent condition and are maintained and operated by skilled employes, *some of whom it might be advisable for the Government to retain at least until the consolidation of the Post and Telephone Offices will permit the Postmaster-General to make changes in the personnel.*"

How does that sound to you?

And a couple of pages farther on, in speaking of the acquisition of the smaller exchanges themselves, the report says:

"These switchboards are simple and no great technical knowledge is required to operate them. The operator might perform other duties according to the number of calls per day. The lineman or inspector would keep the lines and equipment in working order *and a Post Office employe could easily be taught to manipulate the board.*"

Surely they do not rate the work of an operator very highly!

In another place, in speaking of the ease with which the two services—that is to say, the Post Office service and the telephone service—could be merged and operated by the Government, the report says:

“It would be feasible to transfer a large number of the telephone offices to Post Office buildings and thus greatly reduce the aggregate expense per quarters. *Furthermore, as the majority of the telephone employes are operators, who require no special technical training, the merging of the two forces would result in a material reduction in the total number of employes required.*”

I wonder what you Traffic people think of that light and airy view of the long, hard schooling we find it necessary to insist upon before we consider an operator able to take up her work, or the years of hard, faithful labor we consider essential before a traffic man can be said to be able to take charge of traffic operations?

So much for that phase of the matter. Now let us consider the reason for Government Ownership of the telephone and telegraph in European countries. Owing to the geographical location of the various countries and their several political conditions, the fear of war and need for military defense is a vital consideration to most of them. It was but natural, therefore, when the telegraph proved itself to be practical that the European Governments should foresee its great usefulness for military purposes and declare the telegraph a Government monopoly. Thus the telegraph systems of Europe have been primarily developed for Government utilization rather than for commercial purposes. The growth of the telephone systems soon proved that the new invention would be a serious rival to the telegraph, and chiefly to protect the latter the telephone was also declared a Government monopoly.

In the United States, however, the same conditions did not obtain and accordingly the development of the telegraph and the telephone was left to individual enterprise. Government Ownership of the electrical means of communication in this country is by no means a new idea, however, for it was recommended by Postmaster-General Cave Johnson in 1845; succeeding Postmaster-Generals in 1867, 1868, 1869, 1871, 1872, 1873, 1880, 1882, 1883 and 1888 made various reports and recommendations upon the subject, and in 1890 the Hon. John Wanamaker made a very comprehensive report and a vigorous plea for Government Ownership. Again in 1911 and 1913 Postmaster-Generals have made

similar recommendations. It is significant that Congress has each time weighed the matter and has decided that the interests of the public are best conserved through private operation of the telegraph systems.

A new situation has arisen, however, since we now find, under the apparently growing Socialistic movement, a United States senator and a member of the House of Representatives both actively urging on the floor of Congress Government Ownership of the telephone and telegraph for the United States. The press of the country has widely printed portions of the speeches of Congressman David J. Lewis of Maryland, made on this subject; and Mr. Lewis, being the recognized mouthpiece of the advocates of the proposition, it will be worth our while to take a careful look at what he has to say about it all.

Broadly speaking, Mr. Lewis treats three general subjects as follows:

1. Present efficient and successful management of the United States Post Office.
2. Insufficiency of the privately owned telegraph systems in this country.
3. Insufficiency of the privately owned telephone systems in this country.

I do not propose to go into a detailed analysis of the first two subjects, but I will touch upon several of the statements contained therein and then devote myself to the third subject.

Mr. Lewis states that our postal system gives indiscriminating service rates as low as any in the world. With regard to the postal deficits he states that they assuredly represent only a small part of the amount of social service rendered under statutory public policies for which the public is not directly called upon to pay. That our postal rates are low is a fact, but is it correct to say that the public does not have to make up the deficit? Expenses which are actual postal expenses, but are not charged against Post Office operation, are estimated from official reports to have been approximately \$17,000,000.00 in 1912. Who pays this enormous sum, but the people as a whole? The compensation to the railroads for the transportation of the mails is admittedly inadequate. The payments of 1912 to the railroads equaled 20 per cent of the total Post Office expenses as reported. If the payments to the railroads

were insufficient by only 10 per cent, the underpayment would amount to about \$5,000,000.00. Mr. Lewis lays great stress upon the efficiency of the Post Office Department. But can it be said that a public service is really efficient unless it adequately meets the demand for service by the user? In practically every large city the Blue Bell public telephone signs stare one in the face wherever one may turn. In many sections of a city, on the other hand, block after block must be traversed before one can find the facilities for buying a stamp or mailing a letter. The public is accustomed to a twenty-four-hour, three-hundred-and-sixty-five-days-in-the-year Bell telephone service. To what degree does the Government provide Sunday mail service? And when all is said the present degree of efficiency in our Post Office has been made possible almost entirely through and remains plainly dependent upon the enterprise and operation of our railroads.

Leaving the Post Office then and coming to the telegraph systems, Mr. Lewis states "among sixteen countries we take but fifteenth place as to telegraph rates." I will not show the tables of telegraph statistics upon which Mr. Lewis bases this statement and similar ones for the reason that later I propose to give you some of his telephone figures and too many statistics are tiresome.

I will say, however, that in order to prove his assertion, Mr. Lewis has compared foreign rates for "*deferred*" or "*slow service*" with the American rates for "*fast*" or "*preferred service*," ignoring the higher foreign and the lower American rates.

The United States telegraph business is, moreover, a long-haul business. The average Western Union telegram goes 570 miles, while the average night letter travels 1025 miles. The wonderful telephone development of the United States has practically closed the short-haul telegraph field, whereas in Europe, where there is no such telephone development, the telegraph business is principally short-haul. More than fifty per cent of the telegrams of the Western Union Telegraph Company travel two hundred miles, and the average haul of its business is more than the possible maximum haul in many European countries. The great distance between telegraph traffic centers makes the American plant requirements heavier and greatly increases the cost of the service.

In Europe a charge is made for the words in the address and signature of a telegram, so that the average number of words per telegram sent free here, that would be charged for in Europe, is

eleven. Also we are more liberal in our count of words in the text of the telegram than are the Europeans; for example, if a message contained the words New South Wales, the foreigner would count New South Wales as three words, while the American Company would charge for it as only one.

The proportion of American offices open all night is much higher than that of European governments. These superiorities of quality and popularization of service must be carefully considered when rates are to be compared.

Mr. Lewis endeavors to prove the social insufficiency of privately operated telegraph systems by showing a table of statistics from which it appears that the United States ranks ninth as to development of telegraph traffic. The statistics used by Mr. Lewis are particularly in error in comparisons of telegraph development in European countries and the United States, because the European statistics are heavily "padded" in the following way: Most of the countries of Europe are small in area; so that a very considerable amount of telegraph traffic is international, but in the statistics Mr. Lewis has used, international messages are necessarily counted at least twice—once in the country where the message originates and once in the country where it terminates; and if they pass *through* one or more countries they are also counted in each country through which they pass. In countries similarly situated, or of similar size, this method of counting may be satisfactory in comparing one with the other; but this certainly does not hold as to comparisons with the United States. In the case of France, pneumatic tube messages have been included in the count of telegraph messages. Furthermore, in the United States a tremendous number of telegraph messages pass over what we call "leased wires"—are privately sent, in other words, and do not find their way into our published and available telegraph statistics. The extent of this is hard to determine, but that it is of enormous significance may be readily seen when we learn that in 1910, in the case of the Western Union Telegraph Company, 140,000 miles of wire or 40 per cent of the total mileage of the wire, was devoted to such usage—there is little or none of this sort of thing available for heavy users in European countries.

Even omitting these "privately sent" messages, correct commercial telegraph statistics show that in the face of our very high mail and telephone traffic development, the United States is exceeded in telegraph traffic development only by Norway, which

has a low mail development though a fairly high telephone development, largely under private companies; by France, which is low in both mail and telephone development; and by Great Britain, which has a low telephone development. The telegraph traffic in the United States is highly developed in the face of the highest mail and telephone development in the world.

We now come to the matter that really concerns us most. Mr. Lewis' criticism of private operation and ownership of the telephone is based on three tests which he terms:

(Extract from *Congressional Record*, Page 1416.)

- “(A) The social test: What is the degree of service rendered to the public?
- “(B) The economic: What does it cost the public?
- “(C) The Publicist: What are the social influences?”—[sic.]

The latter item, so far as can be seen, is not definitely or directly covered by Mr. Lewis in his discussions—neither do I understand just what he means by it.

Either by inference or directly, however, he appears to have in mind the following attacks:

- “(1) The relative insufficiency of private telephone operation;
- “(2) The relatively high price of private telephone service;
- “(3) The social insufficiency or inadequacy of private systems.”

Accordingly, an analysis of some of his statistics and arguments has been made under these headings.

Relative Efficiency of Private Telephone Systems.

In connection with my discussion of Mr. Lewis' telephone statistics I will put before you some of his tables in order that we study them together.

TABLE NO. 1
Telephone Operative Efficiency

| Country | Phone Calls per Employe per Annum | Rank | Postal Units per Employe per Annum | Rank |
|------------------------------------|---|--------------|--|------|
| Norway | 146,854 | 1 | 32,414 | 11 |
| Russia | 114,659 | 2 | | |
| Belgium | 98,715 | 3 | 85,819 | 1 |
| Netherlands (Municipal) | 92,251 | 4 | | |
| Sweden | 79,142 | 5 | 35,837 | 9 |
| Denmark (Private) | 79,000 | 6 | | |
| Italy | 67,727 | 7 | 42,947 | 4 |
| Netherlands (Private) | 65,181 | 8 | | |
| United States (Bell Co.) | 58,134 | 9 | 60,651 | 2 |
| Norway (Private) | 50,751 | 10 | | |
| Switzerland | 47,328 | 11 | 37,562 | 7 |
| Netherlands (State) | 38,912 | 12 | 53,621 | 3 |
| France | 34,018 | 13 | 33,697 | 10 |
| Luxemburg | | 14 | 40,321 | 5 |
| Denmark | | 15 | 38,930 | 6 |
| Germany | | 16 | 37,236 | 8 |
| Austria | | 17 | 30,528 | 12 |
| New Zealand | | 18 | 28,696 | 13 |
| Great Britain | | 19 | 26,056 | 14 |
| Hungary | | 20 | 23,025 | 15 |
| Japan | | 21 | 21,820 | 16 |

In Table No. 1 in which Mr. Lewis purports to show the telephone and postal operating efficiencies in seventeen countries, including the United States. In this table we are represented as ranking second in postal efficiency, but ninth in telephone efficiency. It should be first explained that Mr. Lewis has, in setting up these relative efficiency figures, adopted the following plan: As regards telephone efficiency, he has first taken the total number of local calls and to that he has added the number of toll and long-distance calls multiplied by four, assuming that the work of handling a toll or long-distance call is four times as great as that of handling a local one; this grand total he has divided by the number of employees which he understands to be engaged in telephone work, thereby reaching a result shown in the second column, which represents the average number of telephone calls handled per employe per annum. On the whole, he has used the same method in reaching his figures which show the relative postal efficiencies, having divided the number of postal communications by the number of postal employees and reaching the efficiency figures shown in the fourth column.

I want to point out some of Mr. Lewis' most glaring inaccuracies, and to disprove his conclusions. As telephone employees think you will all agree that Mr. Lewis has steered far from the

proper course when he has assumed that the handling of one toll or long-distance call is equal to the handling of four local calls. No such equating of toll traffic is possible. For example: The amount of operating work involved in a long-haul conversation is ordinarily much greater than for a short-haul message. Again, the labor involved depends upon whether there is a direct circuit between the terminating points or whether it is necessary to engage the time of several operators in building up the desired circuit. Moreover, there is a very great difference in the character of toll calls. In the case of one class of toll calls, known as particular-person calls, the calling subscriber asks for a particular person at a distant point, in which case operator not only has to obtain the telephone at which the called person will presumably talk, but also to secure the particular person desired before the conversation can begin. In Europe, generally, the two-number system only is used, so that the operators perform merely the function of establishing the connections with the called telephones. In the United States the particular-person type of toll service widely prevails—so that the function of the operator is not merely to establish a connection between two telephones, but to secure for the calling subscriber a particular person wanted. That this latter class of calls is far more expensive to handle is evidenced by the fact that a special charge is made for particular-person toll and long-distance service in Denmark, Norway and Sweden where this form of service is afforded the telephone-using public. It is, therefore, most apparent that average toll and long-distance calls can be not even approximately compared in the different countries and particularly as between the United States and Europe.

Further, Mr. Lewis has counted each international call in Europe as two conversations, one for the country in which the call originates, one for the country in which it terminates. If such an international call passes through a third country, he has again counted the call for that third country. As an example of how Mr. Lewis has, by the adoption of this method, been able to distort his figures, it may be said that the number of interurban messages used by him in computing his telephone efficiency for Belgium was 1,816,793 (in 1910) of which 464,044 were international messages, including both incoming and outgoing. Again, in accordance with European practice Mr. Lewis counts twice each call which exceeds in length the minimum period, a practice which, of course, he has not followed in the use of his figures for the United States. And this, too, in spite of the fact that in the United

states from 25 per cent to 50 per cent of all toll conversations exceed the initial period of three minutes, and from 3 per cent to 10 per cent exceed six minutes or twice the initial period. The importance of this factor is evidenced by the fact that in Sweden the number of calls—as he terms them—is 31 per cent higher than the number of actual conversations.

It should be mentioned that Mr. Lewis has based his computations on figures secured from a magazine called the *Journal Telegraphique*, in which the figures are generously qualified by footnotes to which Mr. Lewis has made no reference whatever and of which he has taken no account in his table. For example, in reaching his telephone operative efficiency for Norway, his statistics cover the state system only, of which the long-distance staff is largely joint telephone-telegraph, and his statistics include only exclusively telephone employes, and do not even include executive offices. As to Belgium, he has not included the joint telephone-telegraph employes—and as to Sweden, he has excluded all telephone-plant employes, all accounting employes and employes of the executive department. In the case of Switzerland, he has excluded 893 telephone operators of various classes who should, by all means, be included. For France, his statistics include only such employes as devote their entire time to telephone work, and as to The Netherlands, he has included only operators. Now truly, a profound statistician is this member of Congress from Maryland! Using the actual statistics in the *Journal Telegraphique*, it is found that the efficiency for Italy is 36,490 calls per employe (1910) as against the 67,724 per employe quoted by Mr. Lewis. Finally, be it said, the efficiency of the Bell organization, including all employes, was about 72,000 calls equated by Mr. Lewis' method, per employe, in 1912, as against 58,134 as quoted by Mr. Lewis.

I am convinced that we need not spend any more time in an analysis of this first table of Mr. Lewis'. Suffice it to say that it is most inaccurate and the conclusion it purports to draw is very faulty. Moreover, it must be apparent to you that the United States would rank very high indeed if the table were accurately revised.

Perhaps the most significant statistics showing the high efficiency of private operation as against Government operation are those showing the high relative cost of Government systems of Europe as compared with our own. The next table, No. 2, is not one of Mr. Lewis', and the figures, although not all published, are entirely official.

TABLE NO. 2
Average Investment per Telephone

| Country | | Year |
|--------------------------------|-----------------------------|------|
| Austria | \$211.00 | 1913 |
| Belgium | 276.00 | 1913 |
| France | 257.00 | 1913 |
| German Empire | 178.00 | 1913 |
| Great Britain | 197.00 (estimated). | 1913 |
| Hungary | 192.00 | 1913 |
| Italy | 177.00 (estimated). | 1913 |
| Luxemburg | 176.00 | 1913 |
| Switzerland | 190.00 | 1913 |
| United States (Bell) | 153.00 | 1914 |

In his talk on relative efficiency Mr. Lewis has omitted any comparisons between the *quality* of service rendered in foreign countries compared with this country. I can not, however, forbear to mention here in passing *the great difference in the quality of service, which exists* between the Government-owned systems as compared with our privately-owned Bell system. The speed and reliability of our service is the envy and admiration of all the nations of the world. No figures of the speed of foreign telephone service are available, but it is interesting to note that a telephone call in the United States is answered by our operators in an average of four seconds.

Relatively High Price of Private Telephone Service.

TABLE NO. 3
Letter and Local Telephone Rates

| Country | Rank | Local Rate | Letter Rate | Letter Rate Exceeds Phone Rate Per Cent |
|------------------------------------|--------------|-------------------|-------------------|---|
| Norway (Private) | 1 | \$0.004 | \$0.026 | 550 |
| Sweden | 2 | .005 | .026 | 420 |
| Japan | 3 | .005 | .015 | 200 |
| Norway | 4 | .006 | .026 | 333 |
| Russia | 5 | .007 | .036 | 414 |
| Hungary | 6 | .009 | .020 | 122 |
| Denmark (Private) | 7 | .010 | .026 | 160 |
| Austria | 8 | .011 | .020 | 80 |
| Italy | 9 | .013 | .028 | 115 |
| Germany | 10 | .015 | .020 | 33⅓ |
| Netherlands | 11 | .015 | .020 | 33⅓ |
| Belgium | 12 | .015 | .020 | 33⅓ |
| Switzerland | 13 | .017 | .020 | 17 |
| United States (Bell Co.) | 14 | .021 | .020 | *5 |
| Luxemburg. | 15 | .024 | .020 | *20 |
| France. | 16 | .024 | .020 | *20 |

*Phone rate exceeds letter rate.

Table, No. 3, is Mr. Lewis' comparison of "local" telephone rates for various countries, by which he means the average exchange revenue per local message. With these rates he compares postal letter rates and shows percentages by which the telephone "rate" exceeds or is exceeded by the letter rate.

Here he ranks the United States (Bell System) fourteenth in the figures shown for sixteen countries. I must take exception to Mr. Lewis' statement, for the following reasons. First, I cannot admit that these statistics are correct, for careful study and analysis discloses the fact that the Bell figures should be \$.017, and not \$.021 as shown by Mr. Lewis. I have had opportunity to get at the true figure for Switzerland, and find that it is \$.028, rather than \$.017 as Mr. Lewis shows. Moreover, I am at loss to understand why the letter rate is held up as an index either to the cost or to the value of a telephone message. Telephone service and mail service are so dissimilar that no comparison of prices is significant. If Mr. Lewis intends to use the letter rate as a standard of value, the wide variations in the telephone rate in countries like Norway, Sweden, Denmark, The Netherlands and Belgium, in which the letter rates are substantially the same, show that the postal rate cannot be so used. I am afraid, too, that Mr. Lewis overlooked the fact that, of the six countries having a local telephone rate of \$.01 or less, Norway, Sweden, Russia and Denmark are very largely operated by private companies. Just here I want to show you a table, No. 4, which bears on a consideration of which Mr. Lewis makes no mention, but with which we should acquaint ourselves in analyzing the previous table of telephone operative efficiency.

TABLE NO. 4

Switzerland

| Hours of Service | Per Cent. of Total Offices |
|--|-------------------------------|
| With continuous service | 3.5 |
| From 6 a. m. to 9 p. m. | 42.0 |
| From 7 a. m. to noon, and from 1 p. m. to 8.30 p. m. | 8.0 |
| From 7 a. m. to noon, and from 2 p. m. to 6 p. m., and from 8 p. m. to 8.30 p. m. | 46.5 |
| | 100.0 |

New Zealand

| Hours of Service | Per Cent. of Total Offices |
|--|-------------------------------|
| With continuous service (week days) | 6.3 |
| Open later than 5 p. m., but not after midnight. | 34.1 |
| Open from 9 a. m. to 5 p. m. only | 59.6 |
| | 100.0 |
| Open more than two hours on Sunday | 7.4 |
| Open two hours or less on Sunday. | 7.9 |
| Not open on Sunday | 84.7 |
| | 100.0 |
| Not open on holidays | 80.0 |

Perhaps some of you are unfamiliar with the fact that night service is a distinct luxury in many European countries. And you must appreciate that under such conditions our foreign cousins have a distinct advantage over us in handling their telephone traffic, in that they do not have to maintain an operating force during the hours when the central offices are least busy. Just glance over these tables of Hours of Service for Switzerland, and for New Zealand, which latter country is frequently referred to by Government Ownership advocates as high in operating efficiency and observe how important a factor it is.

I may add that in Sweden only 75 out of 2064 central offices and switching stations give day-and-night service; and in many of the exchanges where all-night service is given, a special message charge is made for each conversation during night hours. In Belgium, in what is known as the Brussels Group, which consists of the city of Brussels and environs, and which has over one-third of the telephones in the entire country, there are 23 central offices, of which only 2 are operated day and night. Of the remainder, 19 are open only from 7 A. M. to 9 P. M., one from 7 A. M. to 8 P. M., and one from 7. A. M. to 7. P. M.

The next table, No. 5, which was prepared by Mr. Lewis, shows the annual tariffs for flat-rate service in a number of leading cities of Europe and the United States, these rates ranging from \$21.44 in Christiania to \$228.00 in New York.

TABLE NO. 5

Table Giving Annual Tariffs, Flat-Rate Service, for Leading Cities of Different Countries

| | |
|---------------------------------|---------|
| Christiania | \$21.44 |
| Stockholm | 24.44 |
| The Hague | 26.00 |
| Copenhagen | 32.00 |
| Tokyo | 34.00 |
| Auckland, New Zealand | 34.09 |
| New Haven | 84.00 |
| Cincinnati | 100.00 |
| Oakland, Cal. | 84.00 |
| Philadelphia | *90.00 |
| †Chicago | *84.00 |
| Denver | 138.00 |
| Amsterdam | 36.00 |
| Rotterdam | 36.00 |
| Berlin | 43.20 |
| Budapest | 57.90 |
| Paris | 77.20 |
| London | 82.79 |
| Boston | 125.00 |
| Seattle | 90.00 |
| Washington | 168.00 |
| ‡Baltimore | 174.00 |
| San Francisco | 180.00 |
| ‡New York | 228.00 |

American average exceeds foreign average 300 per cent.

*Competition.

†Recently this rate raised to \$125; competition presumably removed.

‡Baltimore and New York limited to 5400 and 5700 calls.

Mr. Lewis has not told us the classes of service represented by these rates, although we may assume they are identical in all cases. He has apparently selected just one rate for each city, which, in itself, makes comparisons utterly misleading and totally incorrect. He has not told us that the figures used for foreign cities represent, in practically all cases, the charge for flat-rate service, and that the figures used for the American cities are based on message-rate schedules. Moreover, he has used maximum rates—whereas, in most flat-rate cities in the United States not more than 10 per cent of the subscribers pay maximum rates, while in the message-rate cities less than 1 per cent—excluding private branch exchange subscribers—pay the maximum quoted charge. A comparison of minimum rates would be more significant, but this has not been attempted by Mr. Lewis.

You will observe that Mr. Lewis has included a reference note which indicates that the Chicago rate of \$84.00 was recently raised to \$125.00, "competition presumably removed."

As to whether or not this is correct will be indicated by the authoritative statement that the rate of \$84.00, as shown by Mr. Lewis, is a flat rate of the Independent Company still operating in that city, and the \$125.00 of the Chicago Telephone Company has been in effect for many years, and was authorized by the Chicago City Council after complete public investigation in 1907. Under the Chicago telephone rate ordinance of 1913, this flat rate of \$125.00 was abolished as to all new subscribers, and in its stead a rate of approximately \$125.00 for not more than 6000 messages was established. It should be noted that no change in rates in Chicago has ever been made as a result of competition. It is also important to note that the rate of \$84.00 is the only rate quoted by the Independent Company for business service but that *more than 60 per cent of the Chicago Bell business subscribers pay less than this minimum Independent Company's business rate.*

It must be apparent to you that this table of Mr. Lewis' is made up of cities which are not selected with regard to population or number of telephones. It is a matter of general knowledge that rates in large exchanges must be higher than in small exchanges. And so a comparison of the rates in some of the foreign exchanges named by Mr. Lewis with those of similar size in the United States is shown in this next table, No. 6.

TABLE NO. 6

Comparison of Rates in Exclusively Flat-Rate Exchanges

| Foreign Exchanges Named by Mr. Lewis * | | | | Bell Companies | | | | |
|--|----------------------|-----------------|-----------------|----------------------|----------------------|---------------------|-----------------|---|
| Name of Exchange | Number of Telephones | Maximum Rate | Minimum Rate | Name of Exchange | Number of Telephones | Maximum Rate | Minimum Rate | Per Cent of Subscribers Paying Not More than Foreign Minimum Rate † |
| The Hague | 11,594 | \$36.00 | \$24.00 | Scranton | 11,513 | \$60.00 | \$24.00 | 44 |
| Tokyo | 34,910 | 40.50 | 31.50 | Omaha | 33,358 | 72.00 | 24.00 | 79 |
| Auckland | 5,892 | 38.88 | 16.61 | Terra Haute | 4,328 | 42.00 | 18.00 | |
| Amsterdam | 14,341 | 46.00 | 46.00 | Rochester | 14,010 | 48.00 | 24.00 | 77 |
| Rotterdam | 12,442 | 44.00 | 34.40 | St. Joseph | 12,094 | 60.00 | 24.00 | 81 |
| Budapest | 24,567 | 60.90 | 60.90 | St. Paul | 23,426 | 72.00 | 24.00 | 94 |
| | | | | | | | | Under \$77.00 |
| | | | | New York | 483,653 | \$36.00 and | 42.00 | 79 |
| | | | | Philadelphia | 133,523 | | 24.00 | 90 |
| ‡Paris | 95,033 | 77.20 | 77.20 | Chicago | 308,177 | | 18.25 | 91 |

*These rates include "entrance fees" where charged and therefore represent the cost of service for the first year.

†The per cent of subscribers paying not more than the foreign minimum rate, is based on main stations, excluding private branch exchanges, coin boxes and public pay stations.

‡There is no exchange in the United States having 95,000 telephones or more, with exclusively unlimited service, so that the minimum rates of New York, Philadelphia and Chicago are shown for comparison with Paris rates.

§For Manhattan; lower rates in other parts of the city, minimum \$24.00.

In the next table, No. 7, Mr. Lewis quotes statistics in which he has endeavored to compare the rate per call for two, five and ten thousand calls in Berne, Switzerland, and Covington, Kentucky; Brussels and Baltimore; Sydney and Washington, and so on.

TABLE NO. 7
Rates Per Call for Measured Service in Principal Cities
of the World

| Country | Stations* Jan. 1, 1913 | Per Call | | |
|--|---------------------------|---------------|---------------|---------------|
| | | 2000 Calls | 5000 Calls | 10,000 Calls |
| Switzerland, Berne . . . | 5,113 . . . | \$.0140 . . . | \$.0116 . . . | \$.0100 . . . |
| Covington, Ky. . . . | 57,186 . . . | .0450 . . . | .0360 . . . | .0238 . . . |
| Belgium, Brussels . . . | 21,470 . . . | .0184 . . . | .0100 . . . | .0060 . . . |
| Baltimore, Md. . . . | 51,170 . . . | .0500 . . . | .0336 . . . | .0312 . . . |
| Australia, Sydney . . . | 22,000 (1912) . . . | .0197 . . . | .0106 . . . | .0086 . . . |
| Washington, D. C. . . | 47,297 . . . | .0490 . . . | .0366 . . . | .0283 . . . |
| Italy, Rome | 10,049 (1911) . . . | .0200 . . . | .0140 . . . | .0120 . . . |
| New Orleans, La. . . . | 18,882 . . . | .0400 . . . | .0280 . . . | .0240 . . . |
| Austria, Vienna | 56,747 . . . | .0200 . . . | .0160 . . . | .0100 . . . |
| Cincinnati, Ohio . . . | 57,186 . . . | .0450 . . . | .0360 . . . | .0330 . . . |
| Germany, Berlin | 144,543 . . . | .0216 . . . | †.0086 . . . | †.0043 . . . |
| Boston, Mass. | 155,703 . . . | .0450 . . . | .0360 . . . | .0330 . . . |
| France, Paris | 95,033 . . . | .0240 . . . | †.0154 . . . | †.0077 . . . |
| New York, N. Y. . . . | 483,653 . . . | .0555 . . . | .0420 . . . | .0400 . . . |
| Denmark, Copenhagen . . | 50,802 . . . | .0294 . . . | .0197 . . . | .0171 . . . |
| San Francisco, Cal. . . | 107,702 . . . | .0648 . . . | .0487 . . . | .0265 . . . |
| Average postal telephone rate | | .0197 . . . | .0123 . . . | .0085 . . . |
| Average American telephone rate . . . | | .0493 . . . | .0371 . . . | .0300 . . . |
| American rate exceeds postal | | 167% . . . | 200% . . . | 215% . . . |
| American rate exceeds Australian . . . | | 150% . . . | 250% . . . | 250% . . . |
| * Not included in Mr. Lewis' table. | | | | |
| † Computed on flat rates. | | | | |

Here Mr. Lewis has, as previously, compared European flat rates with American message rates, in all cases using our message rates when they are higher, as shown by the fact that he ignores the Boston and New Orleans flat rates. He gives absolutely no consideration to the number of telephones in the cities compared (which I have inserted), and makes no mention of the fact that the rates for residence service in this country are substantially lower than the business rates, while in Europe—at least in France, Switzerland and Germany, of which I have personal knowledge—there is no distinction between the rates for business and residence service. You must appreciate that this is a factor of great importance in rate comparisons, for in the American cities practically

no residence subscribers pay an amount as high as the one rate available for Government service in Paris (\$77.20), and that in Chicago there are more residence telephones than there are telephones of all kinds in the entire Paris Exchange (95,000), and that approximately 140,000 of these Chicago residence subscribers pay a rate \$50.00 lower than the Paris rate.

I should add, too, that, quoting his rate in Berlin, Mr. Lewis neglects to state that this rate does not include night service, for which a special charge of about five cents per night message is made to all subscribers. I think you will all agree that this is very significant, in view of the fact that a very large amount of traffic is handled during night hours in large American cities, so that obviously no comparisons could be made between the Berlin rates and those of any American city.

You will note that there have been inserted into this table some very important figures which Mr. Lewis did not show, namely, the telephone developments of the several cities. And I think you will agree that the mere insertion of these figures is convincing of the impropriety of the comparisons and—I may safely say—the ridiculousness of the conclusion sought to be drawn.

In the next table, No. 8, in connection with his discussion of local telephone rates, Mr. Lewis gives Bell rates for fourteen cities before, during and after competition. For example, he shows the Bell rate before competition in York, Pa., as \$72.00; during competition, \$15.00; and “after competition was wiped out or Bell found it impossible to kill competition,” \$48.00, et cetera. Mr. Lewis’ conclusions, from the study of these tables, are:

- “(1) That Bell rates are exorbitant where there is no competition, and
- “(2) That there is an unjustifiable lack of uniformity in Bell rates, whereas Postal rates are uniform for the same service.”

TABLE NO. 8
Bell Rates Before and After Competition

| City | Bell Rate Before Com- petition | Bell Rate During Com- petition | Bell Rate After Com- petition Wiped Out or Bell Found It Impossible to Kill Competition |
|--------------------------|--------------------------------------|--------------------------------------|---|
| Richmond, Va. | \$72.00 | \$12.00 | \$72.00 |
| York, Pa. | 72.00 | 15.00 | 48.00 |
| San Jose, Cal. | 60.00 | 30.00 | 60.00 |
| Dubuque, Iowa | 48.00 | 24.00 | 48.00 |
| Winona, Minn. | 48.00 | 12.00 | 48.00 |
| Savannah, Ga. | 36.00 | 18.00 | 36.00 |
| Mobile, Ala. | 64.00 | 18.00 | 48.00 |
| Lynchburg, Va. | 65.00 | 12.00 | 48.00 |
| Roanoke, Va. | 30.00 | 30.00 | 48.00 |
| Norfolk, Va. | 40.00 | 40.00 | 60.00 |
| Oswego, N. Y. | 45.00 | 30.00 | 36.00 |
| Kenosha, Wis. | 30.00 | 30.00 | 42.00 |
| Iowa City, Iowa. | 42.00 | 24.00 | 36.00 |
| Tampa, Fla. | 30.00 | 30.00 | 54.00 |
| Average Rate | 49.00 | 23.00 | 49.00 |

With reference to the foregoing table, it should be noted:

- “(A) The table is totally worthless because the columns, showing Bell rates ‘before competition’ and Bell rates ‘after competition is wiped out,’ give rates for the best grade of business service, whereas the rates shown in the column ‘Bell rates during competition’ are in no case rates for the best grade of business service, but are, in most cases, for an inferior grade of residence service; and in some cases, like York, the rate stated has not been quoted for any kind of service.
- “(B) The rates for certain exchanges named have been decreased instead of increased after the elimination of competition.
- “(C) Such reductions as have been made in rates after the introduction of competition have, in most cases, been similar to those made at about the same period in non-competitive exchanges.
- “(D) The statistics given are not only incorrect but the inferences which have been drawn are not justified in general. A study of the rate

TABLE NO. 9
 Bell Rates After Cessation of Competition

| | No. of Exchanges | Per Cent of Exchanges |
|---|------------------|-----------------------|
| No change in rates | 47 | 51 } 86 |
| No increase in rates in three years | 3 | 3 } |
| Rates decreased | 30 | 32 } |
| Rates increased within three years | 13 | 14 |
| Total | 93 | 100 |

history in exchanges where former competition has ceased, in places of more than 10,000 population, as given in the table, No. 9, shows that rates have been increased within three years after competition has ceased in only thirteen out of ninety-three exchanges, and rates have decreased in exchanges where competition has ceased in thirty out of ninety-three cases.”

With reference to Long-Distance Tariffs, Mr. Lewis gives his table, No. 10, which shows rates for certain distances in fifteen countries. The United States (Bell System) is ranked last.

TABLE NO. 10
 Long-Distance Tariffs

| Country | 100 Miles | 300 Miles | 500 Miles | 700 Miles |
|------------------------------------|-----------|------------|------------|------------|
| (a) Sweden | \$0.08 | (a) \$0.13 | (a) \$0.20 | (a) \$0.34 |
| (b) Norway | .09 | (k) .24 | (k) .36 | (m) .38 |
| (c) France | .10 | (b) .34 | (m) .38 | (k) .48 |
| (d) Italy | .19 | (c) .35 | (n) .38 | (c) .58 |
| (e) Belgium | .19 | (m) .38 | (c) .53 | (g) 1.25 |
| (f) Denmark | .20 | (n) .38 | (h) .60 | (l) 1.26 |
| (g) Japan | .20 | (d) .38 | (g) .82 | |
| (h) New Zealand | .24 | (f) .40 | (o) 1.50 | |
| (i) Great Britain | .24 | (g) .50 | | |
| (k) Germany | .24 | (o) .62 | | |
| (l) Australia | .32 | (h) .72 | | |
| (m) Austria | .38 | (l) .80 | | |
| (n) Hungary | .38 | (i) .84 | | |
| (o) Russia | .38 | | | |
| (p) United States (Bell) | .60 | (p) 1.80 | (p) 3.00 | (p) 4.20 |

NOTE—The letters preceding the name of each country are used to identify the countries to which the rates given for 300, 500 and 700 miles belong.

This table is incorrect and misleading for the following reasons:

- “(A) In several instances there are important errors in fact. For example, in the cases of Norway and France, Mr. Lewis has confused kilometers with miles, the rates in both cases applying to 100 kilometers, or 62.1 miles, and not to 100 miles. As to Austria, Mr. Lewis has shown a rate of 38 cents for all distances, whereas the rates are: 100 miles, 38 cents; 300 miles, 61 cents; 500 miles, 81 cents.
- “(B) The table does not take into account the shorter distances which are more important.
- “(C) The comparison does not take into account important differences in the methods of applying the unit charges. The American rates are for an initial period of three minutes. For longer conversations, the rates are about one-third of the initial rate for each additional minute. The foreign rates are, in nearly all cases, as Mr. Lewis states, for an initial period of three minutes; but overtime is charged for at the initial rate for each additional three minutes or fraction thereof. This is a very important difference in rates, since a considerable number of conversations extend beyond three minutes, but less than four minutes or five minutes.
- “(D) The service given in foreign countries is ‘two-number’ service, whereas the service given in the United States is ‘particular-person’ service, the rates for which should not be, and are not, the same in any country where both are given.
- “(E) The comparison covers ‘ordinary’ or ‘deferred’ service, whereas the Bell rates cover ‘preferred’ or express service. The deferred service is an inferior service not given in this country because it would not be tolerated by the public. Mr. Lewis admits that the rates are for deferred service, but infers that our own toll service is no better; consequently *official* information respecting both the delays on deferred and preferred service is pertinent. I will read you a few samples. The average length of time from the filing of a long-distance order to completion of connection with called person, between London and Paris, is one hour; between London and Leeds, thirty minutes; between London and Liverpool, twenty

minutes; between Berlin and Cologne, thirty-two minutes; between Berlin and Paris, thirty-six minutes; between Stockholm and Gefle, forty-five minutes, for an ordinary message and fifteen minutes for a preferred message, et cetera. Contrast the above with the fact that average time, from the filing of a message to its completion (unless subscriber called cannot be secured immediately) on the long-distance lines of the American Telephone and Telegraph Company, is less than five and one-half minutes, and on two-number service, as for example, New York and Philadelphia, the average time is about seventy seconds.

“(F) Rates for preferred long-distance service in Europe, where both the deferred and preferred services are given, are either double or treble the ordinary deferred service rate. In general, the European rates appear to be based on a very broad zone plan, whereas in the United States the direct rates or block and section rates are used. Consequently the preferred European rates are higher than our own in many cases and are less in others. The only proper comparison of toll rates under these circumstances would be that of toll revenue per message mile minute. Such statistics, however, are not available.

“(G) The foreign method of operating toll service, on an extended delay basis, should greatly increase the utilization of toll plant which is a factor of the very greatest importance in the cost of service. Mr. Lewis assumed that there is a low-toll plant efficiency in this country, due to the restriction of traffic by high rates. It should be noted that the number of toll messages in the United States is almost twice as large as the combined toll messages of all the countries named, although their aggregate population is much greater than ours.

“(H) The cost of toll plant in the United States is higher than in European countries. Mr. Lewis disputes this because copper is higher in Europe by the cost of transportation and because he assumes the facts to be the same with reference to poles. As to copper he is correct, but as to poles he is in error. The chief error, however, consists in the assumption that poles and copper constitute the chief cost of toll lines. An inventory of our own toll

plant indicates that the cost of copper and poles is only 45 per cent of the total cost of the line plant, the balance consisting of manufactured ware, right-of-way and labor. Rights-of-way expense is practically negligible in the Government systems and both labor and manufactured costs are lower.

“(I) Unquestionably, Government toll rates in general are not remunerative. It is interesting to note, in this connection, that the Chambers of Commerce of several cities in France have been compelled to pay for the entire cost of building interurban toll lines and of stringing additional circuits in an attempt to obtain adequate toll service, because the French Government either would not, or could not, finance the building of an adequate toll plant. The lines which were built or completed in this way, became the absolute property of the Government, and no repayment of the funds, or interest thereon, has been made or contemplated.

“(J) The comparison covers domestic service only, whereas a fair comparison should include international service. The foreign international rates are higher than the foreign domestic rates.”

In connection with toll rates, I will submit a table, No. 11, which I have had prepared showing the average rates for toll and long-distance service of 10-, 25-, 50- and 100-mile hauls in this country and some of the foreign countries.

TABLE NO. 11

Comparison of Ordinary and Urgent Domestic Toll Rates—
Europe and United States
Three-Minute Periods—10, 25, 50 and 100 Miles

| Figured in cents | | | | |
|------------------|-------------|--------------|--------------|---------------|
| | 10 Miles | 25 Miles | 50 Miles | 100 Miles |
| Norway | | | | |
| Ordinary . . | 4.0 (10.0) | 8.0 (20.0) | 12.0 (30.0) | 25.5 (63.8) |
| Urgent . . | 12.0 (30.0) | 21.4 (53.5) | 30.8 (77.0) | 65.7 (164.3) |
| Denmark | | | | |
| Ordinary . . | 6.7 (19.7) | 13.4 (39.4) | 16.1 (47.4) | 26.8 (78.8) |
| Urgent . . | 13.4 (39.4) | 20.1 (59.2) | 25.4 (74.7) | 46.9 (138.0) |
| Germany | | | | |
| Ordinary . . | 4.7 (10.2) | 12.0 (26.1) | 17.9 (38.9) | 29.7 (64.6) |
| Urgent . . | 14.3 (31.1) | 23.8 (51.7) | 41.7 (90.7) | 77.3 (168.0) |
| Austria | | | | |
| Ordinary . . | 8.1 (24.5) | 18.3 (55.5) | 26.4 (80.0) | 46.7 (141.5) |
| Urgent . . | 24.3 (73.5) | 42.7 (129.4) | 67.0 (203.0) | 127.9 (387.6) |
| France | 4.8 (10.7) | 10.8 (24.0) | 10.8 (24.0) | 18.1 (40.2) |
| Belgium . . . | 19.3 (56.7) | 24.1 (70.9) | 24.1 (70.9) | 24.1 (70.9) |
| Great Britain . | 6.0 (10.9) | 9.0 (16.4) | 16.2 (29.5) | 30.0 (54.5) |
| United States . | 5.0 | 15.0 | 30.0 | 60.0 |

You will note rates in brackets which were equated on the basis of the value of money as shown by wages for switchboard operators after three years' service. It is a fact that toll rates here are lower than in foreign countries.

That Mr. Lewis is in error in his conclusions as to telephone rates is proved by the fact that the average total revenue and the average exchange revenue per station in the principal European countries is only about \$1.00 less in each case than in the Bell system, despite the fact that the costs are generally higher here. The average revenue per station of the foreign countries is \$39.14, as compared with the average revenue of \$40.14 per station in the United States. For exchange revenue only, the European figure is \$29.91 as against \$30.93 for the United States. Operating and other expenses are lower in Europe than in the United States. Although it is not possible, in most cases, to determine at what loss the Government systems are operated, due to the lack of adequate accounting methods and to the merging of telegraph and telephone expenses, it is certain that, in several instances at

least, the foreign telephone systems are partly carried through taxation. The most complete answer to Mr. Lewis' price comparison is derived from his own reasoning, for, according to his theory, the test of price is use. If prices are relatively high here, the use will be relatively low, and if the rates of the Government systems are relatively low, the use of the service will be relatively high. I will enlarge upon this point a little farther on.

The Social Insufficiency or Inadequacy of Private Telephone Systems.

Mr. Lewis states, in effect, that the deterrent influence of high rates has prevented a development of the telephone business in the United States which in itself results in lower efficiency of personnel than Governments obtain; and estimated that the Government would obtain an enormous increase in traffic with its presumably lower rates. The issue, is, therefore, joined as to the relative adequacy and social insufficiency; or, in telephone parlance, the development of private and Government systems.

Mr. Lewis' only statistics directly bearing upon the development of telephone service in this table, No. 12, which is a comparison intended to include what is known in the United States as "Toll and Long-Distance" conversations.

TABLE NO. 12

| Long-Distance Conversations Per Phone | | |
|---------------------------------------|----------------------------|------|
| Country | Number of Conversations | Rank |
| Denmark | 761 | 1 |
| Netherlands. | 634 | 2 |
| Denmark (private) | 348 | 3 |
| Germany | 301 | 4 |
| Sweden | 150 | 5 |
| Russia | 142 | 6 |
| Norway | 135 | 7 |
| Switzerland | 130 | 8 |
| France | 125 | 9 |
| Norway (private) | 109 | 10 |
| Italy (private) | 73 | 11 |
| Japan | 69 | 12 |
| Italy | 62 | 13 |
| United States (1912, Bell) | 48 | 14 |
| Belgium | 44 | 15 |
| Austria | 37 | 16 |
| Hungary | 34 | 17 |

This table ranks the United States (Bell system) fourteenth among seventeen countries. No reliance should be placed on this table for the following reasons:

- “(A) Some of the foreign Governments have advised us that they cannot make a separation between local and toll messages, even approximately.
- “(B) A complication as to the counting of the international telephone messages exists, for the reason that a telephone message going from one foreign country to another, or from one foreign country through a second foreign country to a third foreign country, is counted by each country as a message; also, when a patron exceeds the time limit on a foreign toll or long-distance message he must place a second call, so that, in reality, one message may be counted as two or three messages. In this country, of course, a subscriber may talk as long as desired, and his conversation is counted as one message.
- “(C) In any case, statistics of interurban and long-distance traffic per telephone station are not significant because:
- “(1) When development in stations is low, as in Europe, the service is confined to business houses and the more prosperous residences. It is from this class of subscribers that toll messages naturally originate. When development in local service is very high, as in this country, many subscribers are included (chiefly residence) whose social sphere and pecuniary resources do not require or permit an extended use of toll lines. Hence the use of the station in measuring toll development tends to a restricted showing of toll development, where general telephone development is high.
- “(2) The rates and conditions under which extension and private branch exchange stations may be obtained are so onerous, under Government systems in general, that the stations in Europe are chiefly main stations, whereas in this country development in telephones of all classes is high.
- “(D) The only significant comparison of toll service development would be that of message mile minutes, which it is not practical to obtain either in this country or in any other, for the total toll service development. Statistics, such as Mr. Lewis quotes, do not indicate even the average toll message haul.”

A complete answer to Mr. Lewis' statement that the telephone service of private companies is socially inefficient or inadequate is best answered in a study of the following:

"First: The total telephone traffic per capita for the United States and for the principal foreign countries.

TABLE NO. 13
Total Telephone Traffic Per Capita for United States and Principal Foreign Countries

| Country | Operated By | Traffic Per Capita | % of U. S. |
|-----------------------|------------------------|--------------------|------------|
| United States | Private | 161.99 | 100.0 |
| Denmark | Private* | 81.24 | 50.0 |
| Sweden | Govt. and Private . . | 77.47 | 47.8 |
| Norway | Govt. and Private . . | 70.00 | 43.2 |
| Germany | Government | 34.89 | 21.5 |
| Netherlands | Government† | 27.92 | 17.2 |
| Great Britain | Govt. and Mun. | 23.81 | 14.7 |
| Luxemburg | Government | 18.45 | 11.4 |
| Belgium | Government | 18.23 | 11.2 |
| Switzerland | Government | 17.85 | 11.0 |
| Austria | Government | 12.55 | 7.1 |
| Italy | Govt. and Private . . | 9.93 | 6.1 |
| Hungary | Government | 9.59 | 5.9 |
| France | Government | 8.36 | 5.2 |

*Less than 2% of local operation is government.
†Including municipal. There is a small amount of private operation.

NOTE—This table is based on figures for 1912 with the exception of France which is for 1910.

"Second: The number of telephones per 100 population in the principal foreign countries and in the United States.

TABLE NO. 14
Total Telephones In Service and Number of Telephones per 100 Population In Various Countries, January 1, 1913

| Country | Operated by | No. of Telephones | Telephones per 100 Population | Per Cent of United States Development |
|---------------------|-----------------------|---------------------|-------------------------------|---------------------------------------|
| United States . . . | Private | 8,975,074 | 9.3 | 100.0 |
| Denmark | Private* | 118,398 | 4.2 | 45.0 |
| New Zealand . . . | Government | 42,934 | 4.0 | 43.0 |
| Sweden | Govt. and Private . . | 217,554 | 3.9 | 42.0 |
| Norway | Govt. and Private . . | 75,000 | 3.1 | 33.0 |
| Australia | Government | 121,000 | 2.6 | 28.0 |
| Switzerland | Government | 90 573 | 2.3 | 25.0 |
| Germany | Government | 1,302,672 | 1.9 | 20.0 |
| Great Britain . . . | Government | 738,738 | 1.6 | 17.0 |
| Luxemburg | Government | 3,910 | 1.5 | 16.0 |
| Netherlands | Government† | 77,195 | 1.3 | 14.0 |
| Belgium | Government | 58,640 | 0.8 | 8.6 |
| France | Government | 293,195 | 0.7 | 7.5 |
| Austria | Government | 161,230 | 0.5 | 5.4 |
| Hungary | Government | 75,738 | 0.4 | 4.3 |

*Some government operation
†Some private operation. Largely municipal

States and in Other Countries, January 1, 1913

“Third: The number of telephones per 100 population in the principal cities of the United States compared with that of other large cities.”

| United States | | | | Other Countries | | |
|---------------------|------------|---|--|-----------------|-----------------|-------------------|
| City | Population | Bell Telephones Per 100 Population | Total Telephones Per 100 Population | Population | City | Operated by |
| New York, N. Y. | 5,270,000 | 9.2 | 3.4 | 7,280,000 | London | Government |
| Chicago, Ill. | 2,358,000 | 13.1 | 3.2 | 2,940,000 | Paris | Government |
| Philadelphia, Pa. | 1,614,000 | 8.3 | 6.2 | 2,320,000 | Berlin | Government |
| Boston, Mass. | 1,417,000 | 11.0 | 2.7 | 2,115,000 | Vienna | Government |
| St. Louis, Mo. | 825,000 | 7.5 | 3.6 | 1,150,000 | Glasgow | Government |
| Pittsburgh, Pa. | 788,000 | 8.2 | 5.9 | 1,207,000 | Hamburg-Altoona | Government |
| Baltimore, Md. | 623,000 | 8.2 | 2.8 | 880,000 | Budapest | Government |
| Cleveland, Ohio | 620,000 | 8.3 | 2.6 | 839,000 | Brussels | Government |
| Cincinnati, Ohio | 582,000 | 9.8 | 5.5 | 606,000 | Munich | Government |
| Detroit, Mich. | 541,000 | 12.9 | 4.6 | 617,000 | Leipsig | Government |
| San Francisco, Cal. | 454,000 | 23.7 | 8.4 | 608,000 | Copenhagen | Private |
| Milwaukee, Wis. | 414,000 | 10.5 | 4.3 | 558,000 | Dresden | Government |
| Washington, D. C. | 345,000 | 13.7 | 1.4 | 565,000 | Marsilles | Government |
| Denver, Colo. | 222,000 | 15.9 | 3.5 | 537,000 | Breslau | Government |
| Portland, Ore. | 255,000 | 15.3 | 1.3 | 547,000 | Lyons | Government |
| Omaha, Nebr. | 166,000 | 20.1 | 1.6 | 487,000 | Antwerp | Government |
| | | | 1.5 | 340,000 | Liege | Government |
| | | | 3.2 | 308,000 | Chennitz | Government |
| | | | 22.8* | 351,000 | Stockholm | Govt. and Private |
| | | | 2.0 | 243,000 | Trieste | Government |
| | | | 1.0 | 292,000 | Ghent | Government |

*Of which 70% is that of the Stockholm Telephone Company which competes with the government and does not have connection with the government long-distance lines.

These statistics also refute Mr. Lewis' statement that relatively high rates have forced relatively low development in the United States and indicate, according to Mr. Lewis' own theory, that the telephone rates in the United States are low, as compared with those of Government systems.

I think the last three tables are sufficient to illustrate the complete disparity in telephone development and usage between any foreign countries or cities and the United States and its cities.

As I said at the commencement of this paper, there is very little matter in it that is in any sense original. I have made free use of pertinent information wherever I have found it, providing only that I was able to satisfy myself of its dependability and correctness—but chiefly I have to acknowledge my indebtedness to Mr. C. I. Barnard, Acting Commercial Engineer of the American Telephone and Telegraph Company, whose most painstaking and complete analysis of Mr. Lewis' speeches has supplied me with the great bulk of the figures and facts contained herein.

I have not by any means taken issue in detail with all of the statements and figures contained in the voluminous speech of Mr. Lewis which is contained in full in Volume 51, Issue No. 19 of the *Congressional Record* for the reason that you would be out of patience long before I was through. Statistics are apt to be very tiresome, but I wonder if the patient reader of Mr. Lewis' speeches will be impressed with the significant fact that in all of the maze of figures shown there was not included any comparative station development figures of this country and foreign countries. More significant still is the quality of the service rendered on which question Mr. Lewis has also been silent.

I do not claim that the United States has the best telephone service merely because it has the most telephones, nor because it has the biggest switchboards, nor because it has the longest lines, nor because it has the most thoroughly trained operators, nor because it has invented and perfected unexcelled apparatus, nor even because it has the most capital to work with. All these factors contribute to the excellence of our telephone service, but it is the best in the world because it is the most widely available and the most widely used, and because it has for its operating forces men and women who are devoted to its advancement, and who have won and held their positions not by reason of political

pull, but by reason of merit and ability, courage and steadfastness, training and aptitude for their work and loyalty to their chosen profession.

It seems a far cry that the American public will ever consider seriously the irresponsible figures and illogical arguments of iconoclasts like those who are agitating the operation of this great commercial and social adjunct by a politically administered department of the Government.

